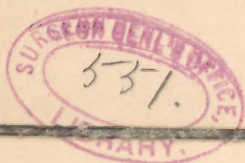


Tack (Ed. E.)

A case of recurrent
paralysis of the
oculo-motor nerve.



JACK (EOL. E)

[Reprinted from the Boston Medical and Surgical Journal
of December 21, 1893.]

A CASE OF RECURRENT PARALYSIS OF THE OCULO-MOTOR NERVE.¹

BY EDWIN E. JACK, M.D.,

*Ophthalmic Surgeon to Out-patients, Boston City Hospital; Assistant
Ophthalmic Surgeon, Massachusetts Charitable Eye and Ear Infirmary.*

THE patient, a Swedish woman, twenty-six years of age, was first seen April 14, 1893. Some weeks previous to this she had been at the Infirmary, where the diagnosis of paralysis of the third nerve was made. She was an average-sized and healthy-looking woman, and with the exception of the present trouble, said she was and always had been perfectly well. She had measles when young, but nothing else. No history or physical signs of syphilis. Bowels and menstruation normal. The mouth and nose were slightly drawn up to the left, but a careful examination by Dr. J. J. Thomas showed no paralysis of any branch of the facial. The ears, examined by Dr. F. L. Jack, showed signs of hypertrophic catarrh; hearing subnormal in left. The father is alive and well. The mother, who died twelve years ago at the age of about forty-five, of "rheumatism and dropsy," suffered with headaches during her life; whether they were migrainous in character could not be told. Two brothers and two sisters are well.

Toward the end of January last, patient was taken with sudden and severe pain in the left brow, temple, cheek and side of nose. The pain was described as dull, like the blow of a hammer. With the pain there was loss of appetite and vomiting. This lasted for two or three days, during which time patient was in bed.

¹ Read before the Boston Society for Medical Improvement, October 23, 1893.



During the first day the left lid began to droop, and in a day or so there was complete ptosis. In the course of two weeks the lid could be raised so as to uncover the pupil, and then there was diplopia, which has persisted in some degree till now.

Examination of the eyes April 14th: O. D. normal; $V. = 1$; H. O. S. — fundus normal. Pupil well dilated. Reaction to light extremely slight. Associated action with accommodation very feeble. $V. = 0.1$ — the poor vision being due to an almost total paralysis of the accommodation. With a rough correction of the refraction, $V = 1$. There was diplopia everywhere except in the lower part of the field from just within the extreme right to the extreme left. O. S. did not move in perfectly. On quick convergence it tended to lag behind and on looking quickly at a distance it deviated outward slightly. Marked limitation in upward movement, movements outward and downward normal. There was apparently a very slight ptosis. An examination October 12th showed practically the same conditions, except that there was no diplopia on the horizontal line.

Attacks similar to the one just described and with the same accompaniments, have occurred many times during the last ten years, beginning therefore at about the age of sixteen. Some years there have been only two or three attacks and in some five or six. In the last five years more than before, but within that time there has been no increase in frequency. The last interval, nine months, is the longest that has ever occurred, so that this year is likely to prove an exception to the previous ones. For the first few years there was no paralysis between the attacks, but the last four or five, the dilatation of the pupil, the paralysis of accommodation and in some degree the diplopia on looking upward, have been permanent. The ptosis

and diplopia in the middle of the common field have usually disappeared within two or three weeks. The last time though a certain amount of ptosis remained for two months and the double vision in the middle of the field lasted longer than formerly; this has been the tendency lately. There has never been any connection with menstruation and never any headache between the attacks. The pain is limited to the region stated, never reaching to the occiput. There is a feeling of heat and sometimes of cold, but no chills. The pain comes on suddenly, without warning, and does not seem to be brought on by anything patient eats or does.

The earliest reported case of this kind was that of Gubler in 1860. Mauthner has published the account of a case seen in Graefe's clinic in 1864. With these exceptions all the cases, about twenty-eight, have been reported since 1882. Of these the majority, fifteen, are females. The age at which the attacks first came on varies from eleven months to thirty-one years, the greater number being under fifteen. In a few the age is not stated. In eleven the right side was affected, in sixteen the left, one doubtful. In most of the cases headache and vomiting preceded the paralysis, in some there was no vomiting, and in a few dizziness was present. Other symptoms occurred in separate cases, such as paresis of arm, trouble in articulation, tenderness in the region of the branches of the fifth, tinnitus and transient deafness, a twitching pain down arm and leg on opposite side, salivation and a general feeling of discomfort before the attack. The pain in most instances resembled that of migraine; in a few it was limited to the region around the eye, or in supraorbital nerve, and in one the whole head was involved. The duration of the attacks varied in different cases and in the same case from a few days to six months. The figures

given, however, refer in some cases to the duration of the pain and in some to that of the paralysis. The intervals also varied, two weeks and four years being the limits. In at least sixteen the attacks became worse and lasted longer. In all of these the paralysis, to some extent, became permanent. In a few only did the severity of the attacks decrease. In Von Hasner's case, the trouble came on before the establishment of the catamenia, later the attacks were coincident with them. In no other instance, I believe, has this coincidence been observed. In Dr. Wadsworth's case, toward the end of the headache, there was a discharge of ill-smelling fluid from the right ear. The child had chronic suppurative otitis. Here there was evidently a close connection between the attack and the ear trouble. The sister of this patient had become blind from post-neuritic atrophy, the neuritis having been brought on by meningitis from aural disease. In one case contraction of the fields of vision during an attack was observed.

Senator divided these cases into two classes, the purely periodic with no symptoms between, and the periodic exacerbating ones. The doubt has been expressed, however, whether there ever has been a purely periodic case, it being claimed that a careful examination would always reveal some paralysis persisting. Charcot suggested the name "ophthalmoplegic migraine," from the supposed analogy to migraine. Another suggestion has been to change the name to "recurrent ocular-motor paralysis" because of the different length of the intervals. Finally, it has been recommended to do away with the artificial division into exacerbating and purely recurrent paralysis, on the ground that the cases with a free interval later acquire some permanent paralysis.

The point of chief interest and importance is the

nature of the trouble — functional or organic — and if organic, the kind and seat of the lesion.

Some have thought it functional, the analogy to migraine being strongly insisted on. Others have supposed a circulatory disturbance, which later gives rise to some permanent lesion, perhaps inflammatory in its nature. Von Graefe attributed the results in his case to a probable fracture of the base, which could have been followed by an otitis or exostosis, this by inflammatory enlargement at times pressing on the nerve. He concluded that a progressive anatomical lesion was probable in every case. This was Manz's view also. Möbius and Von Hasner thought that in most instances the nucleus of the third was affected. Möbius referred the pain to an involvement of the descending band of fibres of the fifth, which lies above and a little to the outer side of the third nucleus. Mauthner and Manz inclined to an extra cerebral lesion.

In three cases there have been autopsies. In Gubler's case, which died in the fourth attack comatose, there was exudation around the right motor-oculi along the base of the brain and a blood-clot in the pons. Weiss' patient died of phthisis. The third nerve as it left the peduncle was flattened, grayish and covered with numerous granulations which contained tubercle bacilli. Thomsen's case died in an insane asylum. The right motor-oculi where it passed through the dura was gray and club-shaped; a fibro-chondroma had separated the fibres of the nerve but had not destroyed them.

The present case seems to throw but little light on the subject, except to emphasize the fact that the tendency of the disease is toward a persistence of the paralysis between the attacks. It is difficult to think of such a disease as functional, but there are certainly strong resemblances to migraine. The character of

the pain in most instances and the accompanying disturbances in some are very similar. There have been though, as far as I know, no visual symptoms spoken of, such as are so frequent in ordinary migraine. Heredity and neuropathic tendencies are not so distinctly traceable. The occurrence of attacks in one case under the same conditions as previous epileptic seizures and the substitution of an ordinary migraine headache for a paralytic attack are suggestive. But the persistence of the paralysis points distinctly the other way. The history of Dr. Wadsworth's case is strongly indicative of organic trouble. It is not possible either to ignore the post-mortem findings in the three cases spoken of. In all these the nuclei were healthy, the lesion basilar.

It seems impossible that any process in the neighborhood of the nuclei, lasting so long, could affect the nuclei of the third without that of the fourth lying next to them or the neighboring third nuclei on the other side of the median line. Certainly the known nuclear ophthalmoplegias do not act in that way. It may be that there is no common cause for these disturbances, and it may be also that the seat of the trouble varies.

The prognosis, as far as it concerns improvement of the condition, must be considered bad.

